

What is Claimed is:

1. A method for forming DRAM cell, comprising the steps of:

5 forming a buried layer by implanting a high concentration impurity into a semiconductor substrate;

forming a MOS transistor having a first gate oxide film, a first gate electrode, a source and drain region;

10 forming a planarized first interlayer insulating film on the entire surface;

etching a portion of the first interlayer insulating film on the drain region, the drain region, and a portion of the semiconductor substrate below the drain region to expose the buried layer, whereby forming a contact hole for
15 storage electrode;

forming a vertical MOS transistor in the contact hole by forming a second gate oxide film pattern whose both ends are respectively overlapped on the drain regions and a second gate electrode overlapped on the second gate;

20 forming a storage electrode on the second gate electrode so that the both ends are respectively extending on the drain regions;

forming a dielectric layer and a plate electrode on the storage electrode;

forming a planarized second interlayer insulating film on the entire surface;

sequentially etching the second interlayer insulating film and the first interlayer insulating film on the source
5 region to expose the source region, whereby forming a bit line contact hole; and

forming a bit line contacting the source region through bit line contact hole.